

REMARKS

This is in response to the final Office Action dated July 26, 2005, in which claims 13, 14, 17, 20-24, 27, 29-30 were rejected under 35 U.S.C. § 102(b) as being anticipated by Cheprasov et al. (US 6,045,431); claim 18 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Cheprasov et al.; claims 19, 25, 26, and 31 were objected to; and claims 32 and 33 were allowed. With this Amendment, claims 14, 17-19, 22, and 30 have been amended. In reliance on the following remarks, the present application with pending claims 13, 14, 17-27, and 29-33 is in condition for allowance, and reconsideration and notice to that effect is respectfully requested.

Rejection under 35 U.S.C. § 102(b)

In the Office Action, claims 13, 14, 17, 20-24, 27, and 29-30 were rejected under 35 U.S.C. § 102(b) as being anticipated by Cheprasov et al. Cheprasov et al. do not show, suggest, or teach the removal of material in the sliders being controlled based upon an electrical response of a magnetoresistive element (or sensor) on each slider to an applied magnetic field. Rather, Cheprasov et al. teach away from such an arrangement. Although Cheprasov et al. disclose measuring an electrical response of each MR element, Cheprasov et al. do not mention using a magnetic field to monitor the electrical response. Cheprasov et al. use load cells to measure force in order to send the correct electrical signal. “As in the preceding embodiment, it is preferred that load cells be employed to measure the deflection of lever arm 120....The load cells 134 are coupled through electrical connectors 138 to conventional electronic circuitry for monitoring load cell readings on an ongoing, real time basis. If desired, the four load cells 134 could be combined into a single compression/tension load cell which measures the force applied to lever arm 120 by plunger 108. When appropriate electrical signals are applied to electrical conductor 109 by conventional control circuitry 76, piezoelectric element 106 is energized so as to apply a downward force to plunger 108....” (Col. 6, lines 10-24).

By contrast, independent claims 13, 20, and 27 require that removal of material is controlled based upon an electrical response to an applied magnetic field. The use of a magnetic field is essential to the application of the present invention. As stated in the specification, "As material removal progresses, the MR read element eventually is capable of sensing the entire magnetic field. Once the MR read element senses the entire applied field, an electrical parameter, such as resistance, will vary as a function of the strength of the magnetic field....Using this known relationship between the strength of an applied field and an electrical parameter, the material removal process can be precisely controlled to achieve the desired stripe height." (Page 12, lines 26-28; page 13, lines 1-9). Cheprasov et al. do not show, suggest, or teach using a magnetic field to monitor the electrical response of each MR element.

Claim 13 requires applying a magnetic field to the bar and means for sensing an electrical response of each of the magnetoresistive elements to the magnetic field. Therefore, in that claim 13 is in condition for allowance, the rejection of claim 13 should be withdrawn and claim 13 allowed. In that claim 13 is in condition for allowance, the rejection of claims 14 and 17, which depend therefrom, should be withdrawn as well and claims 14 and 17 allowed.

Claim 20 requires each sensor configured to sense an electrical response of a magnetoresistive element on the slider to a magnetic field. Therefore, in that claim 20 is in condition for allowance, the rejection of claim 20 should be withdrawn and claim 20 allowed. In that claim 20 is in condition for allowance, the rejection of claims 21, 22, and 24, which depend therefrom, should be withdrawn as well and claims 21, 22, and 24 allowed.

Claim 27 requires a magnetic field source for applying a magnetic field and sensors configured to sense an electrical response to the magnetic field. Therefore, in that claim 27 is in condition for allowance, the rejection of claim 27 should be withdrawn and claim 27 allowed. In that claim 27 is in condition for allowance, the rejection of claims 29 and 30, which depend therefrom, should be withdrawn as well and claims 29 and 30 allowed.

Rejection under 35 U.S.C. § 103(a)

In the Office Action, claim 18 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Cheprasov et al. The Office Action asserts that it would have been obvious to those of ordinary skill in the art to measure the signal amplitude rather than change in resistance as an indicator of stripe height since both parameters are routinely used in end point detection processes. In that claim 13 is in condition for allowance, the rejection of claim 18, which depends therefrom, should be withdrawn as well and claim 18 allowed.

Claim Objections

In the Office Action, claims 19, 25, 26, and 31 were objected to as being dependent upon a rejected base claim, but were said to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In that claim 13 is in condition for allowance, the objection of claim 19, which depends therefrom, should be withdrawn and claim 19 allowed. In that claim 20 is in condition for allowance, the objection of claims 25, 26, and 31, which depend therefrom, should be withdrawn and claims 25, 26, and 31 allowed.

Claim Amendments

Claims 14, 22, and 30 have been amended to correct typographical errors inadvertently made in the original submission. Claims 17-19 have been amended to correct a lack of antecedent basis. Claims 17-19 reference the material removal device of independent claim 13, rather than a lapping device.

In the Figures

FIG. 3 has been replaced to add a label inadvertently omitted in the original submission. The control system 76 was not labeled. The Examiner may reference line 11 of page 10 of the specification to see that the reference number 76 was used to reference the control system of FIG. 3.

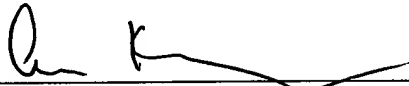
Conclusion

In view of the foregoing, pending claims 13, 14, 17-27, and 29-33 are in condition for allowance. A notice to that effect is respectfully requested.

Respectfully submitted,

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